0.00

Memo

QC

Quality Control

											DQA:	Date:	
NCR:	Yes	/ No			•	WORK ORDER NON-O	COI	NFORM	MANCE / UP	DATE	QA Closed:	Date:	
Mark Ord						DISPOSITION				AGAINST DE		/PROCESS	
work Orae	er: -					Rework			Claid tuba	Crosstube	l	Water Jet	Engineering
Part N	Part No.				Scrap Use-as-is	ſ	Skid-tube Crosstube  Machining Small Fab  Thermoforming Finishing			d. Eng. Coor.	Quality Other		
NCR I	۷o. <sub>.</sub>	·			·····	Work Order Update	]		Large Fab	Composite	11.00,010	Supplier	
Root					Descri	otion of work order update		Initial	Act	tion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ct	nief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator					_								
Material													
Setup					,								
Other													<u> </u>
Process							1						
Supplier		÷											
Training											,		
Unapproved													
				,		F	<u>Α</u> UI	LT CATE	GORY				
Landi	ng G	ear				General		_			-		
		Bending				Bend		Grain			Ovalized		Pressure/Forced
	Root Cause Date Step Qty  Department of the color of the		o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure		
	Cracks					Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
		Crushed/0	Crimped.			Burrs		Instruct	ions Incomplete/l	Unclear	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved		
		Heat Trea	t			Countersink		Mislabe	led		Positioned \	Vrong	_
		Inspection	n Strip in	Tube		Cut Too Short		Misread	ł		Power Loss/	Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

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Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

December-20-12				<del>-</del>	^94	/X	)							Page	2
Item ID: Revision ID: Item Name:	647.1915 Support Angle	>	<u> </u>		Accept	*1	<b>1</b> 900	<b>040</b>	100	<b>)</b> * s	Setup	Start Stop	*N:	S1* S2*	
Start Date: Required Date: Reference:	12/19/12 : 1/11/13	Start Qty: 2.00 Req'd Qty: 2.00		*2* *2*			Cust Item I Customer:	D:	·						
Approvals:	Process Pla	ın:	Date:_	•	Tooling: SPC (Y/N):			ate:		· <b>F</b>	Run	Start Stop	*N *N	R1* R2*	
Sequence ID/ Work Center II 130 *1-30* QC Quality Control	D	Operation Description QC8- Inspect parts - secondary Memo	and check		Set Up/ Run Hours 0.00	•	Tool ID	Tool#	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp	
140 *14\n* Outsource4 Outsource process -	Anodize	Memo Issue P/O: _ Black Anod	193	017 4.1.10.1 (wg 646.3800	0.00					_ Ca	<u>L 1</u>	3/03	3/2 I	2	F.
150 **150* Packaging Packaging		Receive & Inspect for D.  Memo	amage & Ma	at'l Certs	0.00	•				97				3-6	-0)

CR:	Yes /	No	WORK ORDER NON-CONFORMANCE / UPDAT	Γ

Folio

DQA:	Date:	 

									QA Closed:	Date:	
Work Orde	r·				DISPOSITION	:		AGAINST DE	PARTMENT,	/PROCESS	
		<u> </u>			Rework		Skid-tube	Crosstube	D	Water Jet	Engineering
Part N	0				Scrap	_,	Machining	Small Fab	1	d. Eng. Coor.	Quality
NICD N	la.				Use-as-is	iner	moforming	Finishing Composite	Kec/Sto	re/Packaging Supplier	Other
NCR N					Work Order Update		Large Fab	Composite		3upplier [	L1
Root				Descri	ption of work order update	Initial	Δ	Action	Sign &		
Cause	Date	Step	Qty	(	or Non-conformance	Chief Eng	Des	scription	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator										[	
Material		İ								·	·
Setup -						, a,					
Other 🕵 📗							,				,
Process											
Supplier	_										
Training											
Unapproved									]	<u> </u>	l
					<u> </u>	AULT CAT	GORY				
Landin	g Gear				General				1	_	7
	Bending				Bend	Grain			Ovalized		Pressure/Forced
	Centre No	ot Concer	ntric to	o/s	BOM/Route	Hardw		<u></u>	Over/Under	<del> </del>	Temperature/Cure
	Cracks				Broken/Damaged		tion Incomplete		Part Incorre		Weld
L	Crushed/0	Crimped.		<u> </u>	Burrs	$\vdash$	tions Incomplete	e/Unclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs		•		Contamination	<b>├</b> ─	enance		Part Moved		
L	Heat Trea				Countersink	Mislab			Positioned V	· -	
	Inspection	•	Tube	<u> </u>	Cut Too Short	Misrea			Power Loss/	'Surge	Other
	Ripples in Bend			Drill Holes	Offset			<u> </u>			
	Torque W		xtrusio	٦	Drawing	<b>⊢</b>	Calibration				_
	Turning S	equence		[ .	Finish	Out of	Sequence				

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Work Orde				*947	ጸ6*							Page 3
Item ID: Revision ID: Item Name:	647.1915 Support Angle	·		Accept	*N900	040	100	)*	Setup	Start Stop	I VI	S1* S2*
Start Date: Required Date: Reference:	12/19/12	Start Qty: 2.00 Req'd Qty: 2.00	*2* *2*		Cust Item 1 Customer:	ID:			·			
Approvals:	Process Pia	n:	Date:	Tooling:	D	ate:			Run	Start	*N	R1*
	QC:		Date:	SPC (Y/N):	D	ate:				Stop	*NR2*	
Sequence ID/ Work Center II	)	Operation Description		Set Up/ Run Houges	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
155		QC5- Inspect part compl	eteness to step on W/O	0.00				$\sim$				
*155* QC Quality Control		Мето		0.00 13.4.2	<b>)</b>			<u>ə</u>		<del></del>		- +
160		Spray Painting per QSI0	05 4.2	0.00								
*160* SprayPaint		Memo		0.00				2		Ø	Ø	AS 13-4-
Spray Painting		PRIME AS	PER DWG, SEE NOTE #	2					•			

CARDINAL 4860-50 PRIMER BATCH: 124204

QC14- Inspect Spray Paint

Memo

170

\*170\*

Quality Control

0.00

0.00

NCR: Yes

Yes / No

### **WORK ORDER NON-CONFORMANCE / UPDATE**

		,										QA Closed:	Date:	
Nork Orde	<b>.</b> .						DISPOSITION				AGAINST DI	PARTMENT	PROCESS	
WOIK OIGE	' -						Rework	1		Skid-tube	Crosstube		Water Jet	Engineering
Part N	o					-	Scrap		Machining Small Fab			Pro	d. Eng. Coor.	Quality
							Use-as-is		Thermoforming Finishing			Rec/Stor	e/Packaging	Other
NCR N	o. <u> </u>						Work Order Update	Large Fab Composite				] .	Supplier	J [_] [
Root	$\neg$				Desc	rip	ntion of work order update		nitial	Ad	ction	Sign &		
Cause		Date	Step	Qty		o	r Non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
oc/Data														
quip/Tooling			•											
perator								1						
laterial														
etup														
ther								l						
rocess														
upplier														
raining														
napproved		1												
							F.	AUL	T CATE	GORY				
Landin	g Ge	ear					General							_
		Bending					Bend		Grain			Ovalized		Pressure/Forced
		Centre No	t Concer	ntric to (	o/s		BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
	$\Box$	Cracks					Broken/Damaged		Inspecti	on Incomplete		Part Incorred	ct 🗌	Weld
		Crushed/C	rimped.		Γ		Burrs		Instruct	ions Incomplete,	/Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
Į.		Cuffs					Contamination		Mainte	nance		Part Moved		-
ſ	.	leat Treat	t				Countersink		Mislabe	led		Positioned V	<b>Vrong</b>	
	T <sub>I</sub>	nspection	Strip in	Tube	Γ		Cut Too Short		Misread	l		Power Loss/:	Surge	Other
	F	Ripples in	Bend		Γ		Drill Holes		Offset			_		
ſ	T	orque Wa	aves in E	xtrusior	, [		Drawing		Out of C	Calibration				
ſ	_	urning Se			Γ		Finish		Out of S	equence				
	$\neg$ <sub>v</sub>	Wave/Twi	st in Tub	e	Γ		Folio		Outside	Dimensions				



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190

Packaging

QC21- Final Inspection - Work Order Release

0.00

\*\*\*IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV\*\*\*

\*10**0**\*

QC

Memo

0.00

Quality Control

Page 4

Insp.

NCR:	Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE

		<b>%</b>
DQA:	Date:	

								QA Closed:	Date:	* · ·
Work Orde	er:				DISPOSITION		AGAINS	T DEPARTMENT	/PROCESS	
Work Orde					Rework	] [	Skid-tube Crosstub	eП	Water Jet	Engineering
Part N	lo.				Scrap		Machining Small Fa	<b>—</b>	d. Eng. Coor.	Quality
	-	•			Use-as-is	Therr	moforming Finishin	g Rec/Sto	re/Packaging	Other
NCR N	lo				Work Order Update	]	Large Fab Composit	e	Supplier	
Root				Descri	ption of work order update	Initial	Action	Sign &	· <del>_</del> -	<u> </u>
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Description	Date	Verification	QC Inspector
Doc/Data					·-					
Equip/Tooling				ľ						
Operator			ļ ·			<u> </u>				
Material										
Setup										
Other										
Process			1				·			
Supplier										
Training										
Unapproved										
					FA	AULT CATE	GORY			
Landir	ng Gear				General					_
	Bending				Bend	Grain		Ovalized		Pressure/Forced
	Centre N	lot Conce	ntric to	o/s	BOM/Route	Hardwa	are	Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	Inspect	ion Incomplete	Part Incorre	ct	Weld
	Crushed	/Crimped			Burrs	Instruc	tions Incomplete/Unclear	Part Lost/M	issing	Wrong Stock Pulled
[	Cuffs				Contamination	Mainte	enance	Part Moved		
[	Heat Tre	at		. [	Countersink	Mislabe	eled	Positioned V	Vrong	_
_ [	Heat Treat Inspection Strip in Tube				Cut Too Short	Misrea	d	Power Loss/	Surge	Other
	Inspection Strip in Tube Ripples in Bend				Drill Holes	Offset				
[	Torque Waves in Extrusion				Drawing	Out of	Calibration			
ſ	Turning	Sequence			Finish	Out of	Sequence	<del></del>		
	Wayo/Ti	wict in Tub	20		Teolio	Outcide	Dimensions			

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# Picklist Print

December-20-12 8:53:28 AM

Work Order ID:

94786

Parent Item:

647.1915

Parent Item Name:

Support Angle

**Start Date:** 12/19/12

Required Date: 1/11/13

Page 1

Start Qty: 2.00

Required Qty: 2.00

Comments:

IPP REV:A NEW ISSUE 12-10-22 JLM VERIFIED:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.1915E		Manufactured	No				Each	216.0000		2.6315789	)		
Support Angle											##		
				Location		Loc Oty	Lo	c Code	_	- · I			:

B 91666

 Location
 Loc Oty
 Loc Code

 MAT036
 216
 M J P

 91666
 216

2,41

2.7 A

13-02-14

		760	Sim a	
DQA:	Date:			•
· -	<del></del>	 ./	- "	_

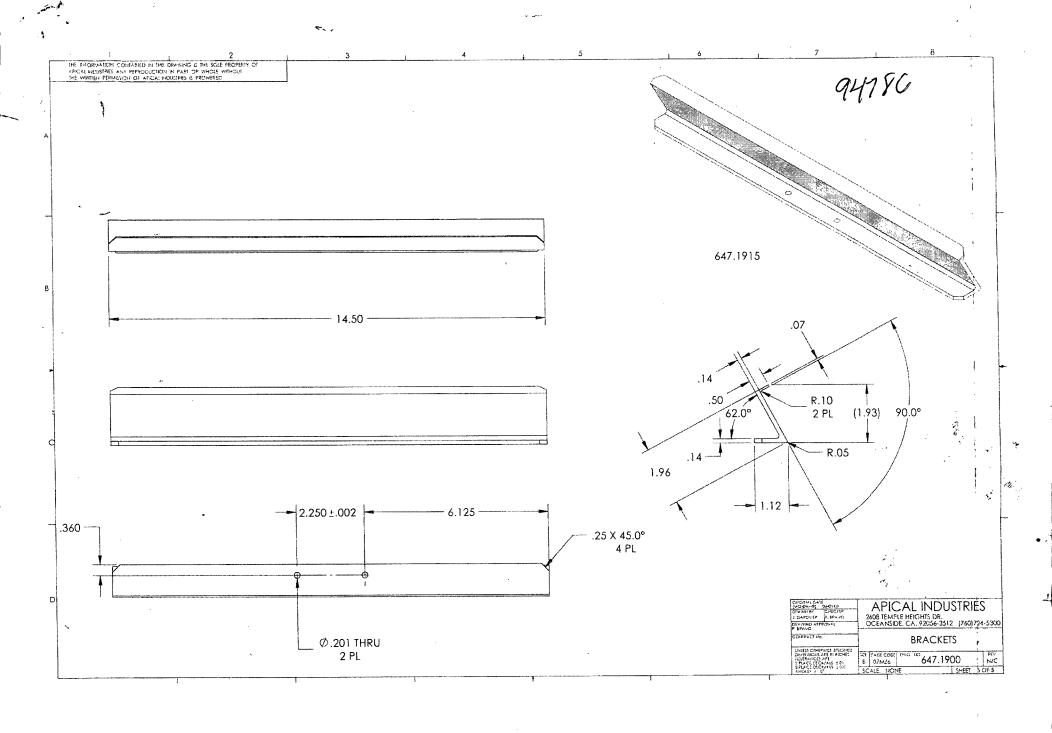
NCR: Yes / No

# **WORK ORDER NON-CONFORMANCE / UPDATE**

		•							,	·		Q	A Closed:	Date:	
Work Order:						DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No.  NCR No.				Rework Scrap Use-as-is Work Order Update		Machining Small Fab Thermoforming Finishing		Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier		d. Eng. Coor. e/Packaging	Engineering Quality Other			
Root					Desci	rint	ion of work order update		nitial	Δ	ction	$\top$	Sign &	. <del></del>	<u>,                                      </u>
Cause		Date	Step	Qty	Desci	-	Non-conformance	ł	ief Eng		scription		Date	Verification	QC inspector
oc/Data												$\dagger$			, , , , , , , , , , , , , , , , , , , ,
quip/Tooling															
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etup	_							İ							
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Inapproved			i 	<u> </u>											<u> </u>
								AUL	T CATE	GORY					
Landir T					_	<b>-</b>	General		1		_	_			<b>.</b>
# P	-	Bending	_		.  -	_	Bend	igsqcut	Grain				valized	. –	Pressure/Forced
				SOM/Route	_	Hardwa		_	_	ver/Under	<del>-</del>	Temperature/Cure			
	_	Cracks				_	Broken/Damaged	H		on Incomplete	,, , <u> </u>	-	art Incorrec	<u> </u>	Weld
}				Burrs	<u> </u>	Instructions Incomplete/Unclear		e/Unclear	Part Lost/Missing		ssing	Wrong Stock Pulled			
}	_	Cuffs			<u> </u>	-	Contamination	<u> </u>	Mainte		_		art Moved		
1	Heat Treat		_	Countersink	⊢	Mislabeled			_	ositioned W		٦٠٠٠			
-	$\neg$	Inspection		Tube	-	_	Cut Too Short	<u> </u>	-		P	ower Loss/S	ourge	Other	
}		Ripples in			<u> </u>	_	Orill Holes	_	Offset	. 101		_			
. }	$\dashv$	Torque W		xtrusion	` <b> </b> -		Drawing 	_	ł	Calibration					
	$\dashv$	Turning Se			-	_	inish		1	equence					
ŀ	Wave/Twist in Tube Fo				١F	olio		Outside	Dimensions						

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G





DART AEROSPACE LTD	Work Order:	94786
Description: 647 1900 BRACKETS	Part Number:	647, 1900
Inspection Dwg: Rev:		Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

Drawing		Actual			Method of	
Dimension	Tolerance	Dimension	Accept	Reject	Inspection	Comments
14,50	±0,010	14,503	/		A 1000	Vern
6.125	+ 0,005	6,125	1		CAC-02	Vern
2,250	+0.002	2,251			MJP-04	Vern
0,360	7 0.005	0,361			MJP-04	vern
0.25	7 2 210	0,240			MJD-04	vern
Do,201	+ 0,005 + 0,5°	0,203	<u>/</u>		MJP-04	Vern
450	± 0,5°	0,203			MUP-Ob	SOUARE
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			-			
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					1	
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MUP

			UA		
Measured by:	A	Audited by:	ر <sup>ر</sup> کرگری	Preliminary Approval:	
Date:	13/02/14	Date:	* -	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	



To

Canada

DART AEROSPACE LTD

HAWKESBURY, ON K6A 1K7

1270 ABERDEEN ST.

A.T.G. Industries Inc. 731, rue Industrielle Rd. PLATING DEPARTMENT Rockland, On K4K 1T2 Canada

Ph: (613) 446-4544 Fax: (613) 446-4556

# Pack List

Number: 62289

Date: 28-Mar-13

#### Ship To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 Canada

ms	200 Fax: 613-632-1185	Ph: 613-632-5200	Fax: 613-632-1185
1115	Ship Via		
Quantity	Description		
	Part: ASST		
lo		Rev:	
	6 PCS 647.1912 3 PCS 647.1818 2 PCS 647.1915 5 PCS 647.2201  HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 Job: 20130184  PO: 19391  Certificate of Conformance	Line:	
	A.T.G. Industries certifies that all items in this shipment with all requirements, specifications and drawings refere	are in conformance enced in the purchase order.	
:	ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY DATE 28/3/13		
·	CERTIFIED SIGNATURE :	·	
	RECEIVER SIGNATURE :		